REMARKS

Claims 1, 3-7, 9-11, 13-15, 18, 22, 23 and 24 remain in the application. Claims 2, 8, 12, 16-17, and 19-21 were previously canceled without prejudice. Claims 1, 11 and 22 are hereby amended. No new matter is being added.

Allowed Claims

Claims 1, 3-7, 9-10 and 23 stand allowed per the latest office action. Applicant respectfully thanks the Examiner for these allowed claims.

Claim 1 is hereby amended to correct a minor typographical error. The amendment merely changes "across the cell" to –across the cells-- in line 4 of claim 1.

Claims 11, 13-15, 18, 22 and 24

Claims 11, 13-15, 18, 22 and 24 stand rejected per the latest office action. With the current amendment, applicant has hereby revised independent claims 11 and 22 so that they include limitations that are clearly parallel to the limitations in allowed claim 1.

Amended claim 11 now recites as follows.

11. A multiprocessor computing system, the system comprising:
multiple symmetric multiprocessing (SMP) nodes;
multiple central processing units (CPUs) at each SMP node;
a memory control unit at each SMP node which is coupled to each CPU at that SMP node;
shared memory at each SMP node which is accessible by way of the memory control unit at that SMP node;

a switching system coupled to the memory control units so as to interconnect the multiple SMP nodes;

an operating system running on the CPUs;

a virtual memory (VM) fault handler within the operating system; and

a VM locality module within the operating system,

wherein the operating system is configured to:

receive from a requesting CPU in one of said SMP nodes a request to access a virtual memory address;

check for a translation of said virtual memory address to a corresponding physical address; and

if said translation is not found, then the operating system is configured to:

send a locality request to the VM fault handler, the locality request including an indication of a search policy to use from among a plurality of search policies;

form a data structure based on physical memory localities at the SMP nodes within the system and the search policy that was indicated, said data structure including sets of equidistant physical memory localities from said requesting CPU; and

select a preferred physical memory locality using a pointer to a locality within said data structure.

(Emphasis added.)

Similarly, amended claim 22 now recites as follows.

22. A multiprocessor computing system configured so as to rapidly select physical memory localities to accomplish efficient memory allocation, the multiprocessor computing system comprising an operating system which includes:

a virtual memory manager configured for extending a memory space beyond limits of a physical address space;

a virtual memory fault handler configured to interrupt execution of the virtual memory manager when a page fault occurs; and

a virtual memory locality module configured to receive a locality request from the virtual memory fault handler, to form a data structure having sets of equidistant physical memory based on a search policy indicated in the locality request, and to rapidly select a physical memory locality in the system using a pointer to the data structure.

wherein the virtual memory manager is configured to:

receive from a requesting processor a request to access a virtual memory address;

check for a translation of said virtual memory address to a corresponding physical address; and

if said translation is not found, then the virtual memory manager is configured to:

send a locality request to the virtual memory fault handler, the locality request including an indication of a search policy to use from among a plurality of search policies;

form a data structure based on physical memory localities within the multiprocessor computing system and the search policy that was indicated, said data structure including sets of equidistant physical memory localities from said requesting processor; and

select a preferred physical memory locality using a pointer to a locality within said data structure.

(Emphasis added.)

With the above amendments having been made, independent claims 11 and 22 now clearly have limitations parallel to the limitations of allowed claim 1. Therefore, applicant respectfully submits that claims 11 and 22 are now also allowable.

Claims 13-15, 18, and 24 depend from claim 11. Hence, these dependent claims should also be allowable.

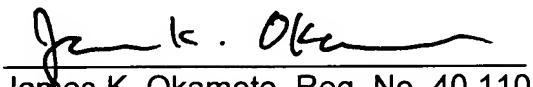
Conclusion

For at least the above reasons, it is believed that the pending claims are now in form for allowance. The Examiner is invited to telephone the undersigned at (408) 436-2111 for any questions.

If for any reason an insufficient fee has been paid, the Commissioner is hereby authorized to charge the insufficiency to Deposit Account No. 08-2025 (Hewlett Packard).

Respectfully submitted,
Michael E. Yoder

Dated: March 26, 2008

By 

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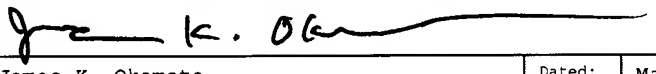
Signature:			
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